Remarks

Claims 38 to 44, 46, 47, 49 to 53, 55 to 57, 60, 61, 63 to 67, 69 to 76, 79 to 81 are pending of which claims 38 and 61 are the only claims in independent form. Claims 66, 67, 69 to 76 and 79 to 81 are withdrawn from consideration.

Claims 38-44, 46, 47, 49-53, 55 to 57, 60, 61 and 63-65, are examined on the merits. Claim 38 has been amended in accordance with page 4, lines 28 to 30. Claim 43 has been amended to incorporate all limitations of the base claim.

35 USC 112, SECOND PARAGRAPH REJECTIONS

On page 3, the Office rejected claims 39 and 49 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, in claim 39, the phrase "like" in the term "tube-like" is rejected in claim 39.

Applicants note that the term "like" is generally only considered indefinite when the term is used in the sense of "for example." (Compare MPEP §2173.05(d)and examples in 706.03(d) 7.34.08-10). The Office is also directed to US Patent 6,902,703, claim 8, issued on June 7, 2005 that originated from the Examiner's examining group as well as US Patent 6, 398,932, claim 1, issued on June 4, 2002, also originating from the Examiner's examining group. A search in the USPTO for patents containing the term "tube like" in the claims resulted in 949 hits on April 16, 2009, with US Patent 7,516,777, issued on April 14, 2009 (see claim 1) being the most recent patent containing the term in the claims.

Claim 49 is cancelled rendering the rejection moot.

35 USC 102(B) REJECTIONS

Also on page 3, the Office rejected claims **38, 41, 42, 44, 46** and **52** under 35 USC 102(b) as being anticipated by Schisselbauer (US 4,968,567).

In particular, the Office expressed the opinion that Schisselbauer discloses an electrochemical cell that includes a cell stack (stack 8) that includes a polarity electrode within the cell stack chamber 10. Schisselbauer is further said to disclose a hole (14) which is being interpreted of being next to the cell stack.

Applicants respectfully disagree and submit that there is nothing in Schiesselbauer that 14 is "next to" the stack and certainly not disposed "close to the electrode" as required by claim 38. Applicants submit that while the MPEP notes that claim terms must be "given their broadest reasonable interpretation," this interpretation must be (apart from being reasonable), consistent with the specification. In this context, the Office is in particular directed to page 4, lines 28 to page 5, line 2, but also to page 12, lines 7 to 9 of the specification and the Figures. Applicants also note that it is unclear from the disclosure of Schiesselbauer where the polarity electrode is within the cell stack. Thus, even if the cell stack was next to hole 14 as the Office stated (and what applicants deny), there is no evidence that Schiesselbauer's polarity electrode, which the Office considered to constitute the "at least one electrode" of the presently claimed invention is anywhere close to the hole 14 (please compare MPEP §2112).

For the reasons presented above, applicants respectfully submit that claim 38 and claims 41 to 42 are not anticipated by Schisselbauer.

With regard to claim **42,** the Office did not rely on an explicit disclosure of

Schisselbauer. Rather, the Office stated that Schiessbauer's container is "fully capable" of being sealed in an antiseptic manner. Thus, applicants assume that the Office relies on anticipation by inherency. Applicants note that the Office always bears the initial burden to develop reasons supporting a reliance on inherency.

The MPEP states that "the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." citing *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

The MPEP also clearly states in MPEP §2112 IV. that "in relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art" citing *Ex parte Levy,* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

Applicants respectfully submit that the Office has not met this burden.

With regard to claim **52**, applicants note that this claim recites an additional container. The Office has not pointed out where this container can be found in Schisselbauer (applicants in fact do not believe that there is such a disclosure). In particular, no container is connected to Schisselbauer's cap 4, which the Office considers the outlet opening recited in the claim.

35 USC 103 (a) Rejections

General: *Treatment of biological material within Schisselbauer's electrochemical cell*

In some (but not all) of the rejections discussed in the following the Office has derived the motivation to combine references from the fact that certain features would be advantageous for treating biological materials within the electrochemical cell of Schisselbauer.

An electrochemical cell is a device used for generating an electromotive force (voltage) and current from chemical reactions, or vice versa, for inducing a chemical reaction by a flow of current. The current is caused by the reactions releasing and accepting electrons at the different ends of a conductor. Applicants respectfully submit that Schiesselbauer's device is adapted to generate electric current by chemical reactions and that the person skilled in the art would have no motivation to use this device for the treatment of biological material as such chemical reactions might harm and/or otherwise affect biological material such as cells and DNA.

Irrespective of the above, applicants respectfully submit that the person skilled in the art would also expect in particular the electrochemical plates of Schisselbauer's cell stack 8 to contain certain ions. The person skilled in the art would further expect that such ions might harm and/or otherwise affect biological material such as cells and DNA. Thus, the person skilled in the art would not be motivated to use Schiesselbauer's container 10 for biological material as suggested by the Office.

On page 5, the Office rejected claims **39, 40, and 43** under 35 USC 103(a) as being unpatentable over Schisselbauer in view of Berson et al. (US 6,720,178 B1, hereinafter "Berson").

The Office acknowledged that Schisselbauer is silent regarding the inlet being a tube. However, the Office noted that Berson discloses a tube 116. While acknowledging that the tube is not disclosed to connect the two chambers of Berson's rolling bottle, the Office expressed the opinion that given the knowledge of the person skilled in the art, it would have been obvious to such a person to try to use to tube of Berson to connect the two chambers of Schisselbauer to obtain the predictable result of moving fluid from the reservoir to the cell stack.
The Office cites *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385 (2007).

In KSR, the court noted that an "obvious to try" rationale may support a conclusion that a claim would have been obvious.
The court explained when such an obvious to try rationale is appropriate:

> "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." Id. at 1397. (*emphasis added*)

Applicants respectfully submit that the Office has not provided any rationale (problem to be solved) why a person skilled in the art would try to connect Schiessbauer's reservoir 2 with the stack container 10 by a tube, let alone why a tube structure of Berson would be one of the "finite number of identified, predictable solutions" to this problem.

Considering Schisselbauer's cell activation which encompassed using an actuable lance (18) in combination with an expandable pressurized capsule 6 pressurizing his electrolyte to force it through hole 14, there seems to be little incentive to connect the reservoir to the stack container via any tube structure as disclosed in Berson. In fact, applicants respectfully submit that a tube like structure connecting reservoir 2 and stack container 10 might render

Schisselbauer's cell unsatisfactory for its intended purpose (compare MPEP § 2143.01).

Applicants respectfully submit that the same applies to a tapered tube according to Berson (Claim 40).

With regard to claim **43**, the Office expressed the opinion that, while Schisselbauer and Berson do not specifically state that the wall and reservoir are made of a deformable material, Berson discloses that his chambers can be of polyethylene, which is said to be an elastic or deformable material. The Office concluded that it would have been obvious to employ the material as the wall material for the reservoir of Schisselbauer.
Applicants note that after activation of Schiesselbauer's cell, the pressurized capsule 6 expands to force the electrolyte from the reservoir through the hole 14 into space 10.
Applicants respectfully submit that using a reservoir wall comprising an elastic or deformable material does not appear to constitute a predictable solution to any problem or that one would have any reasonable expectation of success. In fact, applicants respectfully submit that using such material in Schisselbauer's cell might very well render it unsatisfactory for its intended purpose (e.g., applicants envision that the material might not withstand the pressure the electrolyte is exposed to by the expanding capsule 6 or at least counteract the purpose of the expanding capsule).

On page 7, the Office rejected claims **50, 53, 55 and 60** under 35 USC 103 (a) as being unpatentable over Schisselbauer in view of Schwartzman (US 3,521,745).

On page 8, the Office rejected claims **51 and 56** under 35 USC 103(a) as being unpatentable over Schisselbauer in view of Schwartzman and in further view of

Berson.

The Office acknowledged that Schisselbauer is silent regarding a chamber being divided into several sub-units by at least one dividing member. However, the Office expressed the opinion that Schwartzman disclose a mixing chamber for storing two or three materials in different compartments where each compartment is separated or divided by a membrane that is ruptured in order to mix the materials. For claims 50 and 55, Schwartzman is said to divide the container up into three separate chambers (Fig. 1) and for claim 53 the cover (16) is said to be fully capable of holding the mixed materials thereby forming a single piece. The Office concluded that it would have been obvious to one of ordinary skill in the art to employ the membranes and cover as suggested by Schwartzman in order to hold the electrolytes and consequentially, the biological samples, of Schisselbauer. The suggestion for doing so at the time is said to have been mixing and providing a convenient means for dispensing the fluid afterward.

Applicants respectfully disagree with the Office's analysis. Initially, applicants note that claim 53, 55 and 60 are dependent on claim 52. As in the 35 USC § 102 rejection of claim 52, this element of the claims seems to be not accounted for. With regard to claim 50, applicants respectfully submit that there is no reason to hold the electrolyte of Schisselbauer by any means (or mix and provide any means for dispensing the fluid afterward) beyond those already disclosed in Schisselbauer. Also, applicants note the Office's reference to biological material in Schiesselbauer's cell. The Office has not provided any reason why the person skilled in the art would put biological material into Schisselbauer's apparatus. The Office is directed to "***General:*** *Treatment of biological material within Schisselbauer's electrochemical cell*" starting on page 12 of this response for reasons that would discourage a person

skilled in the art to use the cell of Schisselbauer in connection with any biological material.

As claims **51** and **56** are dependent on claims 50 and 55, the above applies to these claims as well.

On page 9, the Office rejected **claim 49** as being unpatentable over Schisselbauer in view of Blackburn (US 2003/0190608 A1).

Since claim 49 has been cancelled, the rejection is moot.

Also on page 9, the Office rejected claims **47, 57 and 61** under 35 USC 103(a) as abeing unpatentable over Schisselbauer in view of Barbera-Guillem (US 2004/0029266 A1).

The Office acknowledged that Schisselbauer is silent regarding a wall that is a self-sealing wall or septum that can be perforated. With regards to claims 47 and 57, Barbera-Guillem is said to disclose a re-sealable elastomeric septum (septum 230).

The Office reasoned that it would be an obvious modification to the device of Schisselbauer for one of ordinary skill in the art to allow a syringe or pipette to access the electrolyte (or biological sample) contained within the reservoir.

Applicants note that even if there was a reason to render Schisselbauer's electrolyte contained within the reservoir accessible with a syringe (what applicants deny), considering that Schisselbauer's reservoir is pressurized at times, the re-sealable elastomeric septum of Barbera-Guillem might

render Schisselbauer's cell unsatisfactory for its intended purpose (compare MPEP § 2143.01). Concerning the Office's reference to biological material, applicants note that the Office provided no rationale, why Schisselbauer cell would be used in the context of biological material such as the one disclosed by Barbera-Guillem. Thus, the Office is directed to "***General:*** *Treatment of biological material within Schisselbauer's electrochemical cell*" starting on page 12 of this response.

On page 10, the Office rejected **claim 63** under 35 USC 103(a) as being unpatentable over Schisselbauer in view of Bean et al. (US 4,061,543, hereinafter "Bean").

The Office acknowledged that Schisselbauer is silent with regard to an electrode pair within the inner stack. Bean discloses a cuvette for bioassays that includes an electrode pair within the cuvette. Bean is said to disclose that the electrodes within the cuvette (10) generate a controlled electric field in order to avoid mass transfer, electrode bubbling and electrode polarization (col. 2 lines 50-54). The Office expressed the opinion that modifying Schisselbauer based on the teachings of Bean would be obvious to one of ordinary skill in the art in order to generate an electric field within the inner chamber with a reasonable expectation of success.

Applicants note that introducing a voltage to electrodes of Schiesselbauer's cell would induce a chemical reaction in the cell rather than an electrical field within the chamber.

Also, the Office has not provided any explicit reasoning why the person skilled in the art would like to introduce an electrical field within the inner chamber of Schiesselbauer using two electrodes. However, applicants assume that this electrical field should serve a purpose similar or the same as the one disclosed

in Bean. Thus, the Office is directed to "***General:*** *Treatment of biological material within Schisselbauer's electrochemical cell*" starting on page 12 of this response.

On page 11, the Examiner rejects claims **64 and 65** under 35 USC 103(a) as being unpatentable over Schisselbauer in view of Beichmann et al. (US 2002/0164776 A1).

The Office acknowledged that Schisselbauer is silent regarding the material used for the electrodes.

However, the Office stated that Beichmann discloses a chamber for treating cell suspensions in an electric field where the electrodes are made of an electrically conductive material.

The Office expressed the opinion that it would be obvious to one of ordinary skill in the art to employ the plates as suggested by Beichmann in order to provide an electric field within Schisselbauer's [plates/device?- *term missing*]. The suggestion for doing so at the time is said to have been in order to have plates for which the cells or fusion products can be readily rinsed off as disclosed in paragraph [0021] of Beichmann.

The Office is directed to "***General:*** *Treatment of biological material within Schisselbauer's electrochemical cell*" starting on page 12 of this response for reasons that would discourage a person skilled in the art to employ the Schiesselbauer's cell for any treatment of biological material.

Applicants have shown above that the Office has not established a *prima facie* case of obviousness for any of the claims rejected under 35 USC §103 and that the claims are non-obvious over the art cited.

In view of the above, an early notice of allowance is respectfully requested.

No fee additional fees are believed to be due with this response. However, the Office is authorized to charge any fee deficiencies and overpayment to undersign's deposit account no. 50-3135.

Respectfully submitted,

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